

CLIPPEDIMAGE= JP405034259A  
PAT-NO: JP405034259A  
DOCUMENT-IDENTIFIER: JP 05034259 A  
TITLE: DEVICE FOR MEASURING PARTICLE SIZE DISTRIBUTION

PUBN-DATE: February 9, 1993

INVENTOR-INFORMATION:

NAME

NIWA, TAKESHI

ASSIGNEE-INFORMATION:

NAME

SHIMADZU CORP

COUNTRY

N/A

APPL-NO: JP03188563

APPL-DATE: July 29, 1991

INT-CL\_(IPC): G01N015/02; G01N021/47 ; G01N021/49

ABSTRACT:


PURPOSE: To measure a wide range of scattering beam containing large angle scattering beam with high accuracy by simple constitution by measuring the scattering beam due to parallel beam applied in different directions at a plurality of angle positions through a double slit.

CONSTITUTION: A lateral scattering beam measuring optical system 3 is constituted of a laser diode 31, a collimator lens 32 converting the output beam from the laser diode to parallel beam and a lateral scattering beam sensor structure 33 provided to the plane crossing the irradiation surface to a flow cell 1 at a right angle. The structure 33 is constituted of slit plates 331, 332 each having slits S formed thereto in the same number as photodetectors 335a-335e and curved into a cylindrical shape in different radii. Since scattering beam is incident to the photodetectors 335a-335e through the double slits S, the scattering angle range of beam becomes extremely narrow and the intensity distribution of scattering beam can be measured with

high accuracy.

The outputs of the photodetectors 335a-335e are inputted to a computer 4 along with the output of the ring detector 24 of a forward scattering/diffracted beam measuring optical system 2 and the particle size distribution of particles to be measured is calculated.

COPYRIGHT: (C)1993,JPO&Japio



DERWENT-ACC-NO: 1996-374863

COPYRIGHT 1999 DERWENT INFORMATION LTD

TITLE: Optical particle detector for measuring particle size distribution - has several optical sensors which detects size of irradiated material from intensity ratio of scattered light in several direction

TIX:

Optical particle detector for measuring particle size distribution - has several optical sensors which detects size of irradiated material from intensity ratio of scattered light in several direction

ABTX:

The detector includes a semiconductor laser (2) which irradiates a light to an irradiated material (1). The irradiated material scatters the irradiated light and produces an incidence angle in several directions.

ABTX:

ADVANTAGE - Reduces optical particle detector cost due to eliminated complex optical sensor. Accurately detects size of irradiated material from intensity ratio of scattering light accurately. Ensures irradiated material with improved size detection sensitivity. Prevents direct projection of irradiated light in optical detector.

	Type	L #	Hits	Search Text	DBs	Time Stamp
1	BRS	L1	885674	particle adj size distribution	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM TDB	2001/09/12 17:03
2	BRS	L2	30935	particle adj size adj distribution	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM TDB	2001/09/12 16:54
3	BRS	L3	7	scatter adj angle adj detector	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM TDB	2001/09/12 16:56
4	BRS	L4	14	large adj angle adj detector	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM TDB	2001/09/12 16:56
5	BRS	L5	80	back adj scatter adj detector	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM TDB	2001/09/12 16:57

	Type	L #	Hits	Search Text	DBs	Time Stamp
6	BRS	L6	38	forward adj scatter adj detector	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM TDB	2001/09/12 16:57
7	BRS	L7	0	2 and 5 and 6	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM TDB	2001/09/12 16:58
8	BRS	L9	1	2 and 6	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM TDB	2001/09/12 16:58
9	BRS	L8	3	2 and 5	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM TDB	2001/09/12 16:58
10	BRS	L10	1	particle adj size and 5 and 6	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM TDB	2001/09/12 17:12

	Type	L #	Hits	Search Text	DBs	Time Stamp
11	BRS	L11	8	1 and 4	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM TDB	2001/09/12 17:06
12	BRS	L13	4	particle adj size and 6	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM TDB	2001/09/12 17:12
13	BRS	L12	4	particle adj size and 5	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM TDB	2001/09/12 17:13
14	BRS	L14	892892	measuring or detecting and 2	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM TDB	2001/09/12 17:14
15	BRS	L15	353	measuring adj 2	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM TDB	2001/09/12 17:15

	Type	L #	Hits	Search Text	DBs	Time Stamp
16	BRS	L16	76	15 and detectors	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM TDB	2001/09/12 17:15
17	BRS	L17	0	15 and (forward and back) adj detector	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM TDB	2001/09/12 17:16
18	BRS	L19	1	15 and (forward and back) near detector	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM TDB	2001/09/12 17:16
19	BRS	L18	4	15 and (forward and back) same detector	USPAT; US-PGP UB; EPO; JPO; DERWEN T; IBM TDB	2001/09/12 17:17